Michigan Department of Transportation 5100B (07/07)

CHECKLIST TO DESIGNATE AREAS OF EVALUATION FOR REQUESTS FOR PROPOSAL (RFP)

Exhibit B

MDOT PROJECT MANAGER	JOB NUMBER (JN)	CONTROL SECTION (CS)
Lori Swanson	45725	63132

DESCRIPTION IF NO JN/CS

MDOT PROJECT MANAGER: Check all items to be included in RFP. WHITE = REQUIRED GRAY SHADING = OPTIONAL Check the appropriate Tier in the box below			**CONSULTANT:** Provide only checked items below in proposal.
☐ **TIER I ($25,000-$99,999)**	☐ **TIER II ($100,000-$250,000)**	☒ **TIER III (>$250,000)**	
☐	☐	☒	Understanding of Service
☐	☐	☒	*Innovations*
☐	☐	☐	*Safety Program*
N/A	☐	☒	Organization Chart
☐	☐	☒	Qualifications of Team
☐	☐	☒	Past Performance
Not required as part of official RFP	Not required as part of official RFP	☒	Quality Assurance/Quality Control
☐	☐	☒	**Location:** The percentage of work performed in Michigan will be used for all selections unless the project is for on-site inspection or survey activities, then location should be scored using the distance from the consultant office to the on-site inspection or survey activity.
N/A	N/A	☐	Presentation
N/A	N/A	☐	Technical Proposal (if Presentation is required)
3 pages (MDOT forms not counted) **(No Resumes)**	7 pages (MDOT forms not counted)	19 pages (MDOT forms not counted)	Total maximum pages for RFP **not including key personnel resumes**

REQUEST FOR PROPOSAL

The Michigan Department of Transportation (MDOT) is seeking professional services for the project contained in the attached scope of services.

If your firm is interested in providing services, please indicate your interest by submitting a Proposal, Proposal/Bid Sheet or Bid Sheet as indicated below. The documents must be submitted in accordance with the latest "Consultant/Vendor Selection Guidelines for Service Contracts" and "Guideline for Completing a Low Bid Sheet(s)", if a low bid is involved as part of the selection process. **Referenced Guidelines are available on MDOT's website under Doing Business > Vendor/Consultant Services >Vendor/Consultant Selections.**

RFP SPECIFIC INFORMATION

☑ BUREAU OF HIGHWAYS ☐ BUREAU OF TRANSPORTATION PLANNING ** ☐ OTHER

THE SERVICE WAS POSTED ON THE ANTICIPATED QUARTERLY REQUESTS FOR PROPOSALS

☐ NO ☑ YES DATED 10/1/07 THROUGH 12/31/07

☑ **Prequalifed Services** – See page 1 of the attached Scope of Services for required Prequalification Classifications.

☐ **Non-Prequalifed Services** - If selected, the vendor must make sure that current financial information, including labor rates, overhead computations, and financial statements, if overhead is not audited, is on file with MDOT's Office of Commission Audits. This information must be on file for the prime vendor and all sub vendors so that the contract will not be delayed.

☑ **Qualifications Based Selection** – Use Consultant/Vendor Selection Guidelines

For all Qualifications Based Selections, the selection team will review the information submitted and will select the firm considered most qualified to perform the services based on the proposals. The selected vendor will be contacted to confirm capacity. Upon confirmation, that firm will be asked to prepare a priced proposal. Negotiations will be conducted with the firm selected.

** **For RFP's that originate in Bureau of Transportation Planning only**, a price proposal must be submitted at the same time as, but separate from, the proposal. Submit directly to the Contract Administrator/Selection Specialist, Bureau of Transportation Planning **(see address list, page 2)**. The price proposal must be submitted in a sealed manila envelope, clearly marked in large red letters **"PRICE PROPOSAL – TO BE OPENED ONLY BY SELECTION SPECIALIST."** The vendor's name and return address MUST be on the front of the envelope. The price proposal will only be opened for the highest scoring proposal. Unopened price proposals will be returned to the unselected vendor(s). Failure to comply with this procedure may result in your bid being opened erroneously by the mail room.

For a cost plus fixed fee contract, the selected vendor must have a cost accounting system to support a cost plus fixed fee contract. This type of system has a job-order cost accounting system for the recording and accumulation of costs incurred under its contracts. Each project is assigned a job number so that costs may be segregated and accumulated in the vendor's job-order accounting system.

☐ **Qualifications Review / Low Bid** - Use Consultant/Vendor Selection Guidelines. See Bid Sheet Instructions for additional information.

For Qualification Review/Low Bid selections, the selection team will review the proposals submitted and post the date of the bid opening on the MDOT website. The notification will be posted at least two business days prior to the bid opening. Only bids from vendors that meet proposal requirements will be opened. The vendor with the lowest bid will be selected. The selected vendor may be contacted to confirm capacity.

☐ **Best Value** - Use Consultant/Vendor Selection Guidelines. See Bid Sheet Instructions below for additional information. The bid amount is a component of the total proposal score, not the determining factor of the selection.

☐ **Low Bid** (no qualifications review required - no proposal required.) See Bid Sheet Instructions below for additional instructions.

BID SHEET INSTRUCTIONS

A bid sheet(s) must be submitted in accordance with the "Guideline for Completing a Low Bid Sheet(s)" (available on MDOT's website). The Bid Sheet is located at the end of the Scope of Services. Submit bid sheet(s) separate from the proposal, to the address indicated below. The bid sheet(s) must be submitted in a sealed manila envelope, clearly marked **"SEALED BID."** The vendor's name and return address MUST be on the front of the envelope. Failure to comply with this procedure may result in your bid being opened erroneously by the mail room and the bid being rejected from consideration.

PROPOSAL SUBMITTAL INFORMATION

REQUIRED NUMBER OF COPIES FOR PROJECT MANAGER	PROPOSAL DUE DATE	TIME DUE
4	12/19/07	4:00 p.m.

PROPOSAL AND BID SHEET MAILING ADDRESSES

Mail the multiple proposal bundle to the MDOT Project Manager or Other indicated below.

☑ MDOT Project Manager ☐ MDOT Other

Lori Swanson
Oakland TSC
2300 Dixie Highway, Suite 300
Waterford, Michigan 48328

Mail one additional stapled copy of the proposal to the Lansing Office indicated below.

	Lansing Regular Mail	OR	Lansing Overnight Mail
☑	Secretary, Contract Services Div - B470 Michigan Department of Transportation PO Box 30050 Lansing, MI 48809		Secretary, Contract Services Div - B470 Michigan Department of Transportation 425 W. Ottawa Lansing, MI 48833
☐	Contract Administrator/Selection Specialist Bureau of Transportation Planning B470 Michigan Department of Transportation PO Box 30050 Lansing, MI 48809		Contract Administrator/Selection Specialist Bureau of Transportation Planning B470 Michigan Department of Transportation 425 W. Ottawa Lansing, MI 48833

GENERAL INFORMATION

Any questions relative to the scope of services must be submitted by e-mail to the MDOT Project Manager. Questions must be received by the Project Manager at least four (4) working days prior to the due date and time specified above. All questions and answers will be placed on the MDOT website as soon as possible after receipt of the questions, and at least three (3) days prior to the RFP due date deadline. The names of vendors submitting questions will not be disclosed.

MDOT is an equal opportunity employer and MDOT DBE firms are encouraged to apply. The participating DBE firm, as currently certified by MDOT's Office of Equal Opportunity, shall be listed in the Proposal

MDOT FORMS REQUIRED AS PART OF PROPOSAL SUBMISSION

5100D – Request for Proposal Cover Sheet
5100G – Certification of Availability of Key Personnel
5100I – Conflict of Interest Statement

(These forms are not included in the proposal maximum page count.)

Michigan Department of Transportation

SCOPE OF SERVICE
FOR
DESIGN SERVICES

CONTROL SECTION: 63132

JOB NUMBER: 45725 C

PROJECT LOCATION:

The project is located on M-150 (Main Street/Rochester Road) from 2nd Street northerly to University Drive in the city of Rochester, Oakland County. The project length is 0.267 miles.

PROJECT DESCRIPTION:

Consists of all work related to the development and design of final plans for the reconstruction project, including but not limited to the following: final plans, design exceptions, specifications and estimates for construction work such as existing pavement typical information, construction of new pavement, curb and gutter replacement, associated drainage/storm sewer, culvert and/or utility work, sign replacement, pavement markings, maintaining traffic and associated safety work.

PLAN COMPLETION DATE: 04/01/2010

PREQUALIFICATION:

Primary Prequalification Classification:
Roadway Rehabilitation and Rural Freeways

Secondary Prequalification Classification:
Maintaining Traffic Plans and Provisions
Pavement Marking Plans
Permanent Non-Freeway Traffic Signing Plans
Municipal Utilities
Hydraulics
Road Design Surveys
Right-of-Way Surveys
Traffic Signal Design
Geotechnical Engineering Services
Landscape Architecture
Safety Studies

DBE REQUIREMENT: 5%

MDOT PROJECT MANAGER:

Lori Swanson, P.E.
Project Manager, MDOT – Oakland TSC
2300 Dixie Highway, Suite 300
Waterford, Michigan 48328
swansonl@michigan.gov
PH: (248) 451-2456

CONSTRUCTION COST:

A. The estimated cost of construction is:

CONSTRUCTION TOTAL $1,980,000

The above construction total is the amount of funding programmed for this project. The Consultant is expected to design the project within the programmed amount.

If at any time the estimated cost of construction varies by more than 5% of the current programmed amount, then the Consultant will be required to submit a letter to the MDOT Project Manager justifying the changes in the construction cost estimate.

REQUIRED MDOT GUIDELINES AND STANDARDS:

Work shall conform to current MDOT, FHWA, and AASHTO practices, guidelines, policies, and standards (i.e., Road Design Manual, Standard Plans, Drainage Manual, Roadside Design Guide, A Policy on Geometric Design of Highways and Streets, Michigan Manual of Uniform Traffic Control Devices, etc.).

NOTE: A process change mandated by federal audit of MDOT's design process puts the Omissions and Errors Check Meeting after the Plan Completion. Please keep this in mind when preparing your schedule. See MDOT Road Design Manual, Chapter 14 – Procedures – Section 14.54 for corroboration. See "For Your Information" contacts at the end of this document for more info or questions.

Consultant is required to use MDOT's current version of Bentley MicroStation for CADD applications and Bentley GEOPAK for road design. Consultant shall comply with all MDOT CADD standards and file naming conventions.

CONSULTANT RESPONSIBILITIES:

Complete the design of this project including, but not limited to the following:

The Consultant must adhere to all applicable OSHA and MIOSHA safety standards, including the appropriate traffic signs for the activities and conditions for this job and perform field operations in accordance with the Department's Personal Protective Equipment (PPE) policy as stated in the MDOT Guidance Document #10118.

Meet with the MDOT Project Manager to review project, location of data sources and contact persons, and review relevant MDOT operations. The Consultant shall review and clarify project issues, data needs and availability, and the sequence of events and team meetings that are essential to complete the design by the project plan completion date. Attention shall be given to critical target dates that may require a large lead time, such as geotechnical requirements, ROW submittal dates, Railroad coordination requirements, utility conflict resolution, local agency meetings, etc.

A. Perform design surveys and right of way surveys.

B. Perform a drainage study and related design.

C. Prepare required plans, typical cross-sections, details, and specifications required for design and construction.

D. Prepare pavement condition survey.

E. Compute and verify all plan quantities.

F. Prepare staging plans and special provisions for maintaining traffic during construction.

G. Prepare pavement marking plans and special provisions.

H. Prepare traffic signal plans and special provisions.

I. Prepare permanent signing plans and special provisions for non-freeway sign upgrading.

J. Prepare Right-of-Way plans as required to locate, verify and purchase real estate and/or obtain construction access permits and/or grading permits for this project.

K. Perform a Crash Analysis and Safety Review for this project. (See Attachment B)

L. Prepare an accident analysis report for this project for each of the design elements included within the design exception requests.

M. Provide a capacity analysis, as well as user costs.

N. Assist in the utility coordination for this project.

O. Video tape drainage structures as required to investigate underground drainage system damage within the project limits. (See Attachment E)

P. Provide solutions to any unique problems that may arise during the design of this project.

Q. The Consultant may be required to provide Design Services during the construction phase of this project. If Construction Assistance is required, then a separate authorization for those services will be issued.

R. Maintain a Design Project Record which includes a history of significant events (changes, comments, etc.) which influenced the development of the plans, dates of submittals and receipt of information.

S. If excavation is required, submit the excavation locations which may contain contamination. Project Manager then can proceed in requesting a Preliminary Project Assessment (PPA).

T. The Consultant shall be required to prepare and submit a CPM network for the construction of this project.

U. The Consultant representative shall record and submit type-written minutes for all project related meetings to the MDOT Project Manager within two weeks of the meeting. The Consultant shall also distribute the minutes to all meeting attendees. MDOT will provide and distribute official meeting minutes for the Plan Review Meeting.

V. The Consultant will provide to MDOT at the scheduled submittal dates, copies of the required specifications and plan set materials for distribution by MDOT for all reviews for this project with the exception of The Plan Review. The Consultant shall contact the project manager prior to the submittal dates for the exact number of copies that will be required for submittal.

W. Prepare and submit electronically (native format or Adobe PDF) any information, calculations, hydraulic studies, or drawings required by MDOT for acquiring any permit (ie. NPDES, DEQ, etc), approvals (i.e. county drain commission) and related mitigation. MDOT will submit permit requests.

X. Attend any project-related meetings as directed by the MDOT Project Manager.

Y. Attend information meetings (i.e., public hearings, open houses, etc.) with the public and public officials to assist in responding to concerns and questions. May require the preparation of displays such as maps, marked-up plans, etc.

Z. The Consultant shall assist in the review of utility permit requests, incorporate the information in the design plans, and respond within 2 weeks from receipt of the permit.

AA. The MDOT Project Manager shall be the official MDOT contact person for the Consultant **and shall be made aware of all communications regarding this project**. The Consultant must either address or send a copy of all correspondence to the MDOT Project Manager. This includes all Subcontractor correspondence and verbal contact records.

BB. The Consultant shall contact the MDOT Project Manager whenever discoveries or design alternatives have the potential to require changes in the scope, limits, quantities, costs, or right-of-way of the project.

UTILITIES

The Consultant shall be responsible for obtaining and showing on the plans the location and names of all existing utilities within the limits of the project. In the course of resolving utility conflicts, the Consultant shall make modifications to the plans or design details and provide assistance as directed by the MDOT Utility Permits Engineer and/or Project Manager. The Consultant shall attend any utility meetings called to ensure that the concerns are addressed on the plans involving utilities. The Consultant shall assist in the review of utility permit requests to ensure compatibility with the project. The Consultant will be responsible for miscellaneous staking of utilities.

TRAFFIC CONTROL

The Consultant shall be responsible for all traffic control required to perform the tasks as outlined in this Scope of Design Services.

MDOT PERMITS

The Consultant shall be responsible for obtaining up to date access permits and pertinent information for tasks in MDOT Right of Way (ROW). This information can be obtained through Joe Rios, Utilities/Permits Section, Real Estate Division at (517) 241-2103.

MONTHLY PROGRESS REPORT

On the first of each month, the Consultant Project Manager shall submit a monthly project progress report to the Project Manager.

MDOT RESPONSIBILITIES:

A. Schedule and/or conduct the following:
   1. Project related meetings.
   2. The Plan Review
   3. Utility Meetings.
   4. Quantity summary sheets and final item cost estimates.
   5. Packaging of plans and proposal.

B. Furnish Special Details and pertinent reference materials.

C. Furnish prints of an example of a similar project and old plans of the area, if available. Furnish the E.A.

D. Obtain all permits for the project as outlined in previous section.

E. Coordinate any necessary utility relocation.

F. Furnish FTP site for software download and instructions for the MDOT Stand Alone Proposal Estimator's Worksheet (SAPW).

DELIVERABLES:

The Consultant shall deliver all computer files associated with the project in their native format (spreadsheets, CADD files, GEOPAK files, etc.) on DVD, CD or uploaded to ProjectWise, as directed by the MDOT Project Manager. All CADD/GEOPAK files shall be created and identified with standard MDOT file names as shown in Appendix A of the Road Design Manual. It is the Consultant's responsibility to obtain up to date MicroStation and GEOPAK seed/configuration files necessary to comply with MDOT's CADD standards which are posted to the bulletin board system. When the use of GEOPAK road design software is necessary to develop plans all pay items shall be placed into the CADD file using GEOPAK's Design and Computation Manager so that Quantity Manager can be used to transfer pay item information to SAPW/Trns*port. Any CADD/GEOPAK files that do not conform to MDOT standards will be returned to the Consultant for correction at the Consultant's expense.

Proposal documents shall be submitted in their native format with standard naming conventions as well as combined into one Adobe PDF file in the sequence specified by MDOT. To provide text search capabilities the combined proposal shall be created by converting native electronic files to PDF. Scanning to PDF is discouraged except in instances where it is necessary to capturing a legally signed document or a hard copy version of a document is all that exists.

Plan files shall be submitted in their native dgn format with standard naming conventions as well as plotted into a combined Adobe PDF file. Plan sheets shall be plotted to Adobe PDF with full text search and level on/off capabilities in half size (11" x 17") formats. A full size title sheet shall be plotted stamped and signed then scanned for inclusion with the Adobe PDF set. The original title sheet will be sent to the MDOT Project Manager.

Stand Alone Proposal Estimator's Worksheet (SAPW) shall be used to generate the txt and csv files necessary for import into the Trns*port bid letting software. The SAPW files shall be transmitted electronically by the method specified by the MDOT Project Manager.

The project construction, removal and profile sheets will require a ratio (scale) of **1:40 (English Units).**

Other plan sheets that are required for this project shall be completed by the Consultant. These include, but are not limited to the following plan sheets:

A. The title sheet. MDOT will provide a map of the area on a disk in our workstation format. If the map is not available, MDOT will provide a map that could be used. The Consultant shall be responsible for any revisions to the title sheet and the title sheet and map shall meet MDOT format and layout guidelines.

B. Note Sheet.

C. Typical Cross-Sections.

D. Project specific Special Details.

E. Construction staging and traffic control plans.

F. Detail grade sheets for critical areas.

G. Pavement marking plan(s).

H. Witness and benchmark sheet(s).

I. Soil boring log sheet(s).

J. Structure plan(s).

All plans, special provisions, estimates, and other project related items shall meet all MDOT requirements and detailing practices (i.e., format, materials, symbols, patterns, and layout) or as otherwise directed by the Project Manager. All plans, specifications, and other project related items are subject to review and approval by MDOT.

PROJECT SCHEDULE:

The Consultant shall use the following events to prepare the proposed implementation schedule as required in the Guidelines for the Preparation of Responses on Assigned Design Services Contracts. These dates shall be used in preparing the Consultant's Monthly Progress Reports.

MDOT PRECONSTRUCTION TASKS CONSULTANT CHECKLIST

Please indicate with a check in the box next to each task number whether you believe that task will require consultant involvement on the job. Milestones (a specific event at a point in time) are italicized and underlined. See the P/PMS Task Manual for more details.

Study (Early Preliminary Engineering)

Yes	No	P/PMS Task Number and Description	Date To Be Completed By (mm/dd/yyyy)
		EPE Scoping Analysis	
☐	☒	2120 Prepare Traffic Analysis Report	/ /
☐	☒	2130 Prepare Project Justification	/ /
☐	☒	*213M Concurrence by Regulatory Agencies with the Purpose and Need*	/ /
☐	☒	2140 Develop and Review Illustrative Alternatives	/ /
☐	☒	2155 Request/Perform Safety Analysis	/ /
☐	☒	2160 Prepare and Review EIS Scoping Document	/ /
☐	☒	*211M Public Information Meeting*	/ /
		EPE Draft Analysis	
☐	☒	2310 Conduct Technical SEE Studies	/ /
☐	☒	2321 Prepare for Aerial Photography	/ /
☐	☒	2322 Finish/Print Aerial Photography	/ /
☐	☒	2330 Collect EPE Geotechnical Data	/ /
☐	☒	2340 Develop and Review Practical Alternatives	/ /
☐	☒	*233M Aerial Photography Flight*	/ /
☐	☒	*234M Concurrence by Regulatory Agencies with the Alternatives for Study*	/ /
☐	☒	2360 Prepare and Review EA or DEIS	/ /
☐	☒	*231M Draft Submission to FHWA*	/ /
☐	☒	2380 Circulate EA or DEIS	/ /
☐	☒	*232M Public Hearing*	/ /

MDOT PRECONSTRUCTION TASKS CONSULTANT CHECKLIST

Study (Early Preliminary Engineering)

Yes	No	P/PMS Task Number and Description	Date To Be Completed By (mm/dd/yyyy)
		EPE Final Analysis	
☐	☒	2510 Determine and Review Recommended Alternative	/ /
☐	☒	*250M Concurrence by Regulatory Agencies with Recommended Alternative*	/ /
☐	☒	2525 Prepare and Review Engineering Report	/ /
☐	☒	2530 Prepare and Review Request for FONSI or FEIS	/ /
☐	☒	*252M Final Submission to FHWA*	/ /
☐	☒	2550 Obtain FONSI or ROD	/ /
		Contamination Investigation	
☐	☒	2810 Project Area Contamination Survey (PCS)	/ /
☐	☒	2820 Preliminary Site Investigation (PSI) for Contamination	/ /

Preliminary Engineering

		Design Scope Verification and Base Plans Preparation	
☒	☐	3130 Verify Design Scope of Work and Cost	02/15/2008
☐	☒	3310 Prepare Aerial Topographic Mapping / /	
☐	☒	3320 Conduct Photogrammetric Control Survey	/ /
☐	☒	3321 Set Aerial Photo Targets	/ /
☒	☐	3330 Conduct Design Survey	09/01/2008
☐	☒	3340 Conduct Structure Survey	/ /
☒	☐	3350 Conduct Hydraulics Survey	09/01/2008
☒	☐	3360 Prepare Base Plans	12/01/2008
☒	☐	*311M Utility Notification*	12/01/2008
☒	☐	3361 Review and Submit Preliminary ROW Plans	12/19/2008
☒	☐	*331M Preliminary ROW Plans Distributed*	12/01/2008
☐	☒	3370 Prepare Structure Study	/ /
☐	☒	3375 Conduct Value Engineering Study	/ /
☒	☐	3380 Review Base Plans	12/19/2008
☒	☐	*332M Base Plan Review (Pre-GI Inspection)*	12/19/2008
☒	☐	3390 Develop the Maintaining Traffic Concepts	12/19/2008
		Preliminary Plans Preparation	
☒	☐	3510 Perform Roadway Geotechnical Investigation	12/01/2008
☐	☒	3520 Conduct Hydraulic/Hydrologic and Scour Analysis	/ /
☒	☐	3522 Conduct Drainage Study, Storm Sewer Design, and use Structural Best Management Practices	06/01/2009
☐	☒	3530 Conduct Structure Foundation Investigation	/ /

Preliminary Engineering (cont'd)

Yes	No	P/PMS Task Number and Description		Date To Be Completed By (mm/dd/yyyy)
		Preliminary Plans Preparation (cont'd)		
☐	☒	3535	Conduct Structure Review for Architectural and Aesthetic Improvements	/ /
☒	☐	3540	Develop the Maintaining Traffic Plan	06/01/2009
☒	☐	3551	Develop Traffic Signal Operations Plan	06/01/2009
☒	☐	3552	Develop Preliminary Pavement Marking Plan	06/01/2009
☒	☐	3553	Develop Preliminary Non-Freeway Signing Plan	06/01/2009
☐	☒	3554	Develop Preliminary Freeway Signing Plan	/ /
☐	☒	3570	Prepare Preliminary Structure Plans	/ /
☒	☐	3580	Develop Preliminary Plans	06/01/2009
☒	☐	3581	Review and Submit Final ROW Plans	06/01/2009
☒	☐	*351M*	*Final ROW Plans Distributed*	06/01/2009
☒	☐	3590	Review Preliminary Plans (Hold Plan Review Meeting)	06/24/2009
☒	☐	*352M*	*THE Plan Review (Grade Inspection)*	06/24/2009
		Utilities		
☒	☐	3610	Compile Utility Information	02/01/2009
☒	☐	3660	Resolve Utility Issues	06/01/2009
☐	☒	*360M*	*Utility Conflict Resolution Plan Distribution*	/ /
☒	☐	*361M*	*Utility Meeting*	06/15/2009
☐	☒	3670	Develop Municipal Utility Plans	/ /
☐	☒	3672	Develop Special Drainage Structures Plans	/ /
☐	☒	3675	Develop Electrical Plans	/ /
		Mitigation/Permits		
☐	☒	3710	Develop Required Mitigation	/ /
☒	☐	3720	Submit Environmental Permit Applications	01/22/2010
☒	☐	3730	Obtain Environmental Permit	01/22/2010

Preliminary Engineering (cont'd)

Yes	No	P/PMS Task Number and Description	Date To Be Completed By (mm/dd/yyyy)
		Final Plan Preparation	
☒	☐	3821 Prepare/Review Traffic Signal Plan	01/22/2010
☒	☐	3822 Complete Permanent Pavement Marking Plan	01/22/2010
☒	☐	3823 Complete Non-Freeway Signing Plan	01/22/2010
☐	☒	3824 Complete Freeway Signing Plan	/ /
☒	☐	3830 Complete the Maintaining Traffic Plan	01/22/2010
☒	☐	3840 Develop Final Plans and Specifications	01/22/2010
☒	☐	*380M Plan Completion*	01/22/2010
☐	☒	3850 Develop Structure Final Plans and Specifications	/ /
☒	☐	3870 Hold Omissions/Errors Check (OEC) Meeting	03/04/2010
☒	☐	*387M Omissions/Errors Checks Meeting*	03/04/2010
☒	☐	*389M Plan Turn-In*	04/01/2010
☐	☒	3880 CPM Quality Assurance Review	/ /

Preliminary Engineering – Right Of Way

		Early Right Of Way Work	
☐	☒	4120 Obtain Preliminary Title Commitments	/ /
☐	☒	4130 Prepare Marked Final Right Of Way Plans	/ /
☐	☒	*413M Approved Marked Final ROW*	/ /
☐	☒	4140 Prepare Property Legal Instruments	/ /
		ROW Acquisition	
☐	☒	4411 Preliminary Interviews	/ /
☐	☒	*441M Post-Decision Meeting*	/ /
☐	☒	4412 Real Estate Services Assignment Proposal and Fee Estimate (Form 633s) for Appraisal Work Authorization	/ /
☐	☒	4413 Appraisal Reports	/ /
☐	☒	4420 Appraisal Review Reports	/ /
☐	☒	4430 Acquire Right Of Way Parcels	/ /
☐	☒	4510 Conduct Right Of Way Survey & Staking	/ /
		ROW Relocation	
☐	☒	4710 Relocation Assistance	/ /
☐	☒	4720 Prepare Improvement Removal Plan	/ /
☐	☒	*442M ROW Certification*	/ /

PAYMENT SCHEDULE

Compensation for this Scope of Services shall be on an **actual cost plus fixed fee** basis.

CONSULTANT PAYMENT:

All invoices/bills for services must be directed to the Department and follow the 'then current' guidelines. The latest copy of the "Professional Engineering Service Reimbursement Guidelines for Bureau of Highways" is available on MDOT's Bulletin Board System. This document contains instructions and forms that must be followed and used for invoicing/billing; payment may be delayed or decreased if the instructions are not followed.

Payment to the Consultant for Services rendered shall not exceed the "Actual Cost Plus Fixed Fee, Not to Exceed Maximum Amount" unless an increase is approved in accordance with the contract with the Consultant. All invoices/bills must be submitted within 14 calendar days of the last date of services being performed for that invoice.

Direct expenses will not be paid in excess of that allowed by the Department for its own employees in accordance with the State of Michigan's Standardized Travel Regulations. Supporting documentation must be submitted, with the invoice/bill, for all billable expenses on the Project. The only hours that will be considered allowable charges for this contract are those that are directly attributable to the activities of this Project.

The use of overtime hours is not acceptable unless prior written approval is granted by the MDOT Region Engineer/Bureau Director and the MDOT Project Engineer Manager. Reimbursement for overtime hours that are allowed will be limited to time spent on this project in excess of forty hours per person per week. Any variations to this rule should be included in the priced proposal submitted by the Consultant and must have prior written approval by the MDOT Region Engineer/Bureau Director and the MDOT Project Engineer Manager.

The fixed fee for profit allowed for this project is 11.0% of the cost of direct labor and overhead.

ATTACHMENT A

CS 63031 - JN 45725: M-150 (Main Street)
From 2nd Street to University Drive
City of Rochester, Oakland County

SURVEY SCOPE OF WORK

Survey Limits: As needed for Design, Right of Way, and Construction. A description of survey limits detailing length, width and cross roads must be included in the Survey Work Plan.

NOTES: The Selected Consultant shall discuss the scope of this survey with an MDOT Region Surveyor or an MDOT Lansing Design Surveyor before submitting a priced proposal.

The Selected Consultant surveyor must contact the Region or TSC Traffic and Safety Engineer for work restrictions in the project area prior to submitting a priced proposal.

A **detailed Survey Work Plan must** be included in the project proposal. A **spreadsheet estimate** of hours by specific survey task such as traversing, leveling, mapping, etc., **must** be included in the **priced proposal**.

It is the responsibility of the Professional Surveyor to safeguard all corners of the United States Public Land Survey System, published Geodetic Control and any other Property Controlling corners that may be in danger of being destroyed by the proposed construction project.

GENERAL REQUIREMENTS:

1. Surveys must comply with **all Michigan law** relative to land surveying.

2. Surveys must be done under the **direct supervision** of a Professional Surveyor licensed to practice in the State of Michigan.

3. Work in any of the following categories of survey: Road Design, Structure, Hydraulic, Right-of-Way, and/or Ground Control (Photogrammetric) must be completed by a survey firm which is pre-qualified by MDOT for that category.

4. Surveys must meet all requirements of the Michigan Department of Transportation (MDOT) Design Surveys **Standards of Practice dated March 2007**, the MDOT Design Survey Manual on-line, and the MDOT RTK guidelines. Please contact the Design Survey office to clarify any specific questions regarding these standards.

5. Consultants must obtain all necessary permits required to perform this survey on any public and/or private property, including an up-to-date permit from the MDOT Utilities

   Coordination and Permits Section.

6. Prior to performing the survey, the Consultant must contact all landowners upon whose lands they will enter. The contact may be personal, phone or letter, but must be documented. This notice must include the reasons for the survey on private land, the approximate time the survey is to take place, the extent of the survey including potential brush cutting (which must be minimized), and an MDOT contact person (the MDOT Project Manager or designate).

7 The Consultant must contact any and all Railroads prior to commencing field survey on railroad property. The cost for any permit, flaggers and/or training that is required by the Railroad will be considered as a direct cost, but only if included in the Consultant's priced proposal.

8. The Consultant must adhere to all applicable OSHA and MIOSHA safety standards, including the appropriate traffic signs for the activities and conditions for this job.

9. Consultants are responsible for a comprehensive and conscientious research of all records, including MDOT records, essential for the completion of this project.

10. Measurements, stationing, recorded data, and computations must be in **International Feet**, unless specified otherwise by the MDOT Project Manager.

11. Coordinate values shall be based upon the Michigan State Plane coordinate system NAD83 (CORS). All elevations must be based upon the North American Vertical Datum of 1988 (NAVD88). The datums must be clearly stated in the Survey Work Plan. A preliminary submittal of the adjusted Horizontal and Vertical control for the project may be submitted to the MDOT Survey Consultant Coordinator or Region Surveyor for review and acceptance as soon as it is available.

12. The survey notes must be submitted to the Design Survey Unit in 10" by 12" divided portfolios with flap covers. As many portfolios should be used as are needed to contain all of the required documents and Compact Discs (CD's) or DVD's. **Duplicate CD's must be included in the portfolio, with one set labeled "Region Surveyor".**

13. Each portfolio must be labeled on the outside as in the following example:

    Survey Notes for:
    Route, Location and Project Limits [I-94 under Beaubien Street]
    Control Section [S06 of 82024] Job Number [45197D] Date [*of submittal*]
    By [*Name of Firm*]
    Michigan Professional Surveyor [ ] License # [ ]

14. Each submittal is to be divided into six sections. These sections are to be labeled as follows: **Administrative, Alignment, Control**, **Property**, **Mapping**, and **Miscellaneous**.

15. **All data**, whether electronic or paper, **must be recorded on non-rewritable Compact Discs (CD's) or DVD's**. All paper files, including MicroStation files, must be scanned and/or converted to Adobe Acrobat .PDF format. CD's must be organized in the same manner as the portfolio, such as by Administrative section, Control section, etc. A Table of Contents in Adobe Acrobat format is required that has all .PDF pages of the CD bookmarked/linked so each place in the .PDF archive can be accessed with a single click of the computer mouse. Specified format files such as ASCII text, CAiCE and MicroStation must have separate access in native format outside of the .PDF file. CD's must be labeled with the control section, job number, data type and file names. It is not necessary to label each individual paper page in the portfolio.

16. Each category of survey must be packaged separately (i.e., Structure surveys separate from Road surveys and Hydraulic surveys). CD's must be labeled with the Control Section, Job Number, data type and file names.

17. The Consultant representative shall record and submit typewritten minutes for all project related meetings to the MDOT Project Manager within two weeks of the meeting. The Consultant shall also distribute the minutes to all meeting attendees.

18. The MDOT Project Manager is the official contact for the Consultant. The Consultant must send a copy of all project correspondence to the MDOT Project Manager. The MDOT Project Manager shall be made aware of all communications regarding this project. Any survey related questions regarding this project should be directed to a Survey Consultant Project Manager or MDOT Region Surveyor.

At the completion of this survey for this project, legible copies of all field survey notes, all electronic data, and all research records obtained for this project will be considered the property of MDOT and **must be sent to** the MDOT, Design Support Area, Supervising Land Surveyor, P.O. Box 30050, Lansing, MI 48909. Please use MDOT's Form 222(5/01) entitled "SURVEY NOTES: RECEIPT AND TRANSMITTAL" for all transmittals. A copy of this transmittal form must also be sent to the MDOT Project Manager for Design.

Acceptance of this survey by the MDOT Supervising Land Surveyor and/or the MDOT Project Manager does not relieve the Consultant of any liability for the content of the survey.

WORK RESTRICTIONS

The Selected Consultant and the Selected Consultant only, is advised to discuss Traffic Control scenarios with the MDOT Traffic and Safety Engineer at the closest MDOT TSC prior to submitting a priced proposal.

No work shall be performed or lane closures allowed during the Memorial Day, July 4th, or Labor Day holiday periods, as defined by the MDOT Project Manager or representative specifically designated by the Project Manager.

The Consultant must call the MDOT Region or TSC Traffic and Safety Engineer before beginning work to inform him or her of surveying activity in the area. The Oakland TSC Traffic and Safety Engineer, Steve Stramsak can be reached at (248) 451-2405. The MDOT Region or TSC must be notified at least two weeks prior to lane closures so advance notice can be posted on the Web site.

Traffic shall be maintained by the Consultant throughout the project in accordance with Sections 812, 922, 103.05 and 103.06 of the *Standard Specifications for Construction,* 2003 edition, www.mdot.state.mi.us/specbook/, and Supplemental Specification 03SS001(2) Errata to the 2003 Standard Specifications and all other supplemental specifications currently in effect against the Standard Specifications for Construction. All traffic control devices shall conform to the current edition, as revised, of the *Michigan Manual of Uniform Traffic Control Devices* (MMUTCD). All warning signs for maintenance of traffic used on this project shall be fabricated with prismatic retro-reflective sheeting, and shall be set up five feet above ground.

The Consultant shall use MDOT standard "maintaining traffic" typicals for any and all closures.

Typical MDOT traffic control diagrams are available on line at www.mdot.state.mi.us/tands/plans.cfm

COORDINATION WITH OTHER CONTRACTS IN THE VICINITY

The Consultant shall coordinate his operations with contractors performing work on other projects within or adjacent to the Construction Influence Area (CIA).

The Consultant's attention is called to the requirements of cooperation with others as covered in Article 104.07 of the 2003 Standard Specifications for Construction. Other contracts or maintenance operations may occur during the life of the project.

No claim for extra compensation or adjustment in contract unit prices will be allowed on account of delay or failure of others to complete work unit scheduled.

FIELD SURVEY

The purpose of the field survey is to obtain all information and data required by the project design engineer, to leave control in the field for future construction staking, and to provide a sufficient history of the area to enable the MDOT Design Survey Unit to perform dependable surveys in the future. The Consultant surveyor must discuss the scope of this survey with the project design engineer before initiating any work on this project. Notes of this meeting and a detailed Survey Work Plan with an estimate of hours broken down by specific survey task must be submitted to the MDOT Project Manager and Survey Consultant Project Manager within two weeks of this meeting.

CONTROL

A three dimensional control system must be established throughout the project area. This control shall be based on the Michigan State Plane Coordinate System NAD1983 (CORS) horizontal datum and NAVD 1988 vertical datum. All subsequent control must be based on the established control. Any traverse points or bench marks established must adhere to the Michigan Department of Transportation (MDOT) Design Surveys **Standards of Practice dated March 2007** and be listed in the Control pocket of the portfolio. Contact the MDOT Survey Consultant Coordinator for existing control in the area.

OPUS positioning may be used as a check, and for positioning Primary Control as defined in the MDOT Standards of Practice for Design Survey March 2007. For any and all OPUS solutions, a RINEX format file with a minimum of two hours of GPS data must be included, as well as the OPUS solution (extended version) from NGS. All OPUS solutions must be verified within 0.20 foot, either by a separate OPUS solution from an independent occupation, or by a NGS/CORS adjustment.

If GPS-derived elevations are used, the Surveyor's Report and the Witness List and Witness Sheet for the project must clearly state that the vertical datum is "NAVD 1988 GPS-derived from Geoid 03."

A mapping control point that is a rebar in the ground should not be considered a benchmark. The elevation of a rebar that is a control point should be verified or re-established prior to use as a benchmark.

The Witness list sheet for this project must have a formula for grid to ground conversion, and a statement that a mapping control point that is a rebar in the ground should not be considered a benchmark, and its elevation should be verified or re-established prior to use.

All Witness lists, for horizontal control, benchmarks, government corners, and alignment points, must use all capital letters exclusively. Capital letters are easier to read on half-size plan sheets.

GOVERNMENT CORNERS

Any PLSS corners within the project limits must be recovered or established and tied to the project coordinate system. Any PLSS corners necessary for legal alignment determination and/or property ties for Right of Way issues must be recovered or established and tied to the project coordinate system.

All PLSS corners must be recorded in accordance with PA 74 of 1970, as amended, and all applicable administrative rules. A copy of each recorded Land Corner Recordation Certificate must be submitted to the MDOT Design Survey Office as part of the final report. All PLSS corners located in hard surface roads must be protected by a monument box, regardless of impending construction. The Consultant shall provide to the Survey Consultant Project Manager a list of any affected Government or Property Controlling Corners in the detailed work plan for discussion or approval.

The Consultant surveyor must contact the County Remonumentation Representative prior to beginning work on the project to inform him of proposed corner perpetuation activities, and to obtain information pertinent to PLSS corners and/or property controlling corners affected by project construction.

All **monument boxes** through the project area must be accounted for by the Consultant surveyor, shown on the project mapping, and have a recorded LCRC submitted in the survey portfolio.

ALIGNMENT

Since most existing alignment points locate and define the boundary between the public Right of Way and private ownership, legal alignment points are considered Property Controlling Corners and must be recovered and recorded in accordance with PA 74 of 1970, as amended, and all applicable administrative rules. A copy of each recorded Land Corner Recordation Certificate must be submitted in the Property Section of the final portfolio.

The Consultant must clearly define in the Work Plan what type of alignment(s) is proposed, Legal or As Constructed, how the stationing will be established, and whether or not the alignment(s) will be staked in the field.

An **alignment sheet** must be prepared and submitted that shows the alignment(s) with stationing and coordinates, and the source of stationing, curve data, and the alignment definition (As Constructed or Legal). All alignments must be **annotated** as in the following examples: As Constructed alignment for CS 45011 as surveyed in 2006, or Legal Alignment of 1952 for CS 38016 as surveyed in 2007. Showing government corners with distances along government lines to the alignment are also appropriate for this CADD drawing. MicroStation is the recommended format. Some tangents may be graphically shortened to “shrink” the drawing to fit paper size.

The Consultant must provide an **alignment control point list with witnesses** in ASCII format for all alignment points found or set. This list must include include datum, point designations,

descriptions, coordinates, combined Scale Factor, and witnesses. This list may be appended to the witness list for horizontal and vertical control points. Witness lists must use only uppercase letters.

All **monument boxes** through the project area must be accounted for by the Consultant surveyor, shown on the project mapping, and have a recorded LCRC submitted with the survey portfolio.

MAPPING

The Consultant must submit a **CAiCE software file, named MDOTjob#.zip**, utilizing CAiCE's built-in archive feature, of all survey mapping points and data files for the mapping area. If a Digital Terrain Model is needed for the project, it must be created in CAiCE and named EXRD. **The CAiCE software used must be Version 10.6 or newer.**

The Consultant is responsible for using the latest MDOT CAiCE Feature Codes, files and Plans Production tugboat (macro), available on the MDOT Design Survey File Transfer Protocol (FTP) site at **ftp://ftp.michtrans.net**/. The consultant Username is "survcons." The consultant Password is $urvcon$. The tugboat can also be used to convert CAiCE files into Geopak and MicroStation formats.

The Consultant must provide an electronic **MicroStation Intergraph Version 8 format file** of the mapping area. This must be named MDOTjob#pl.dgn, for example **79023Cpl.dgn,** and must be submitted **in a sub-directory outside of the CAiCE archive file** named "MicroStation." The MicroStation file will be a 2-D file of the planimetric features including contours. This file must be sized appropriately, utilize the seed file **seedrd_c.dgn** with working units of 1000, 1, and be compiled in standard MDOT format. The Consultant is responsible for using the latest MDOT Resource files, color table, and cell files, available on the MDOT File Library site under CAD_V8. Go to http://mdotwas1.mdot.state.mi.us/public/bbs/

For a comprehensive list of MicroStation level designations, contents and line attributes, refer to the "MDOTV8LEVEL.pdf" table located on the MDOT Design Survey File Transfer Protocol web site. This table replaces the former Attachments AA, C & D. Also in the ftp site, the Consultant should refer to the V8GROUP&ALPHA LIST.pdf file for Data Collection Codes.

The Consultant must also submit **files created from CAiCE that are formatted for design in Geopak** software. This can be accomplished by using the MDOT Plans Production CAiCE Tugboat available on the MDOT Design Survey FTP site. The Consultant must submit a 3D MicroStation Triangle file, a Survey Chain (TIN Boundary) around the edited Triangle file with the name and Feature "CLIP", a Job#.OBS file, a Job#.KCP file, a Job#.XYZ file and a Job#.ALI file. Each alignment must be computed separately and uniquely named to include the JN and a description, such as 79585_AsC_Wbd.ALI. These files must be submitted electronically **in a subdirectory outside of the CAiCE archive file** named "Geopak."

POST SURVEY CLEAN-UP

Once the survey is complete, all stakes must be removed to aid the maintenance crews and adjacent property owners. All benchmarks and control points and their witnesses must remain in place.

FINAL REPORT: DELIVERABLES

The final report for this project shall include:

1. In the first pocket of the portfolio, labeled **ADMINISTRATIVE**, the following will appear:
   a. MDOT's Form 222(5/01) entitled "SURVEY NOTES: RECEIPT AND TRANSMITTAL"
   b. The project's Professional Surveyor's Report on company letterhead consisting of:
      i) A comprehensive synopsis of the work performed on this project, signed **and sealed** by the project's Professional Surveyor.
      ii) The source and methods used to establish the project horizontal and vertical control and alignment(s) for this project.
      iii) A detailed explanation of anything discovered during the survey of this project that may create a problem for the designer or another surveyor.
   c. CD or DVD with all documents scanned or converted into PDF files. Each page must be inserted in a master PDF file and bookmarked for easy retrieval. An example can be provided upon request.
   d. MDOT QA/QC Checklist.

2. In the second pocket of the portfolio, labeled **ALIGNMENT**, the following will appear:
   a. An annotated CADD drawing of the alignment(s), showing:
      i) A statement defining the alignment(s) as **legal or as constructed**
      ii) Stationing, source of stationing, and station equation to existing stationing
      iii) Horizontal coordinates of P.I.'s, at a minimum
      iv) Curve data
      v) Alignment points found or set
      vi) Control points
      vii) Reference lines and angles of crossing (if appropriate)
      viii) Government corners and ties to government lines
   b. Witness list for the alignment points found or set, which shows coordinates, stationing and four witnesses for each alignment point. Witness lists must use only uppercase letters.
   c. LCRC's for alignment points found.

3. In the third pocket of the portfolio, labeled **CONTROL**, the following will appear:
   a. Documentation of horizontal and vertical datum sources.
   b. OPUS documentation
   c. Least squares adjustments for the horizontal and vertical control.
   d. Text files in ASCII format, hard copy and on CD, which contain the witness lists for the horizontal alignment ties, horizontal control points, benchmarks and government corners.

All witness lists must note the datum(s), a combined scale factor for state plane grid-to-ground conversion, and an example thereof. Witness lists must use only uppercase letters.

e. A MicroStation V8 file showing the data in d. above.

4. In the fourth pocket of the portfolio, labeled **PROPERTY**, the following will appear:
   a. Tax maps and descriptions with owner names, addresses and phone numbers, if Right of Way is to be acquired.
   b. Maps, plats, and recorded surveys.
   c. Documents such as plats, Act 132 Certificates and/or tax maps marked with point numbers as property ties, if Right of Way is to be acquired.
   d. Legible **recorded** copies of all Land Corner Recordation Certificates (LCRC) filed for the government corners (PLSS corners and Property Controlling Corners) used for computations and/or in danger of obliteration by impending construction.

5. In the fifth pocket of the portfolio, labeled **MAPPING**, the following will appear:
   a. Mapping file in MicroStation V8 format, and also converted to .PDF format. Hardcopy signed and sealed. All point and line descriptions must use only upper case letters.
   b. An archived CAiCE software file.
   c. Geopak files.
   d. All field survey notes and electronic mapping data used for the project. It is not necessary to submit electronic raw survey data in hardcopy form.
   e. All supporting and supplemental information or data, such as drainage and utilities, electronically only if possible.

6. In the sixth pocket of the portfolio, labeled **MISCELLANEOUS**, the following will appear:
   a. Any photographs taken for clarity of an area
   b. Any newspaper clippings related to the project
   c. Any information not covered in this scope that will be of benefit to the designer or another surveyor

General Notes

a. It is the responsibility of the Consultant to insure that all electronic files submitted to MDOT conform to the required format and that all documents are legible.
b. The Consultant must organize and label the various sections of the portfolio as required by the Standards of Practice for MDOT Design Surveys dated March 2007.
c. All research documents are required to be scanned and placed on the CD.
d. It is desirable to limit paper and to include as much electronic data as possible on Compact Disc or DVD, including scanned items, to facilitate future electronic storage and transmission of survey data. **Duplicate CD's must be included in the portfolio, with one set labeled "Region Surveyor".**

ATTACHMENT B
CS 63132 – JN 45725C: M-150 (Main Street)
From 2nd Street to University Drive
City of Rochester, Oakland County

SCOPE OF WORK FOR CRASH ANALYSIS

The Consultant shall provide MDOT with a Crash Analysis Report, which shall detail the safety performances of the project location (includes not only the mainline, but all major and minor intersections, within the project limits), and provide detailed graphic depiction of countermeasures, and cost/benefit analysis for crash concentration locations.

The Crash analysis Report shall, at a minimum, compare the project location features (mainline, ramps, major intersections, minor intersections and crossovers) to regional averages, identify crash concentration locations, examine crash concentration locations for crash patterns and provide countermeasures for correctable crash patterns. The Consultant shall combine a thorough review of computer-based crash records with field reviews of the roadways characteristics (geometric and operational features shall be specifically noted), to identify crash concentration locations. The Consultant shall provide a Draft Crash Analysis Report and upon review and comment by MDOT, the Consultant shall make any changes identified and submit a Final Crash Analysis Report.

The Consultant shall at a minimum review and analyze the most recent three years of MDOT crash data. If there is a fatality within those three years, the Consultant shall review and analyze an additional 7 years of crash data. For the analysis, the Consultant shall stratify the data by location and the crash data shall also be aggregated by similar roadway segment characteristics. The Consultant shall quarry SEMCOG to determine regional crash averages which will provide a normative measure of comparison to aid in the identification of crash concentrations locations.

The Consultant shall identify crash concentration locations and determine crash patterns. Based on the crash patterns identified for each crash concentration location the Consultant shall develop proposed crash countermeasures. The countermeasures shall be graphically depicted, to scale, with sufficient detail to determine the countermeasures impact to the existing roadway and the proposed roadway improvement.

The countermeasures may range from simple sign/marking/signal modifications up through substantial reconstruction. The Consultant shall present countermeasures stratified into short and long-term solutions. The Consultant shall provide a construction cost estimate for each countermeasure using MDOT Pay Items and shall clearly identify any right-of-way impacts a countermeasure may have. The Consultant shall provide a full cost/benefit analysis for each countermeasure. The Consultant shall also evaluate the crash impacts on design exceptions sought.

ATTACHMENT C

CS 63132 – JN 45725C: M-150 (Main Street)
From 2nd to University Drive
City of Rochester, Oakland County

SCOPE OF WORK FOR DRAINAGE STUDY

The Consultant is to conduct a site investigation of the drainage within the limits of the project. The purpose of this study is to determine where hydraulic analyses and/or surveys are required. If further hydraulic analyses and/or surveys are required, then MDOT will issue a separate authorization for those services.

Work Steps:

1. Prepare a typed report summarizing the drainage affected by the project. For each culvert carrying natural drainage within the MDOT Right-of-Way, provide the following information:

    a. Stream name
    b. Exact location of the culvert, including Section, Town, Range, and Township
    c. Size, type, and condition of culvert
    d. Any evidence of scour or erosion
    e. Any evidence that the structure is undersized
    f. Any county drains
    g. Photographs of the upstream face, downstream face, looking upstream, and looking downstream, as well as any drainage structures, buildings, or farmland that may affect or be affected by the culvert
    h. Drainage area, including delineation on a USGS quadrangle map (or local contour map, if more up-to-date)
    i. Type of work proposed, including existing and proposed lengths

2. The report must include any other effects on the drainage; for example, a raise in road grade or widening.

3. Submit the drainage study to the MDOT Project Manager for review and approval by the Design Engineer - Hydraulics/Hydrology.

4. Receive any items returned by the MDOT Project Manager as incomplete or deficient.

5. Make necessary changes and resubmit the incomplete items, including a written response to all comments.

ATTACHMENT D
CS 63132 – JN 45725C: (Main Street)

From 2nd Street to University Drive
City of Rochester, Oakland County

CONSTRUCTION CRITICAL PATH NETWORKS

I. INTRODUCTION

The Consultant is required to submit a Construction Critical Path Network at various points in the design process. Refer to the following:

P/PMS TASK 3580 - DEVELOP PRELIMINARY PLANS

P/PMS TASK 3830 - COMPLETE THE CONSTRUCTION ZONE TRAFFIC CONTROL PLAN

P/PMS TASK 3840 - DEVELOP FINAL PLANS AND SPECIFICATIONS

Construction Critical Path Networks are often needed to develop the progress schedule for a project. **They are required on any project designated to include an Incentive/Disincentive or Special Liquidated Damages clause**. Construction Critical Path Networks are also recommended for projects with the following characteristics:

1. New construction.
2. Major reconstruction or rehabilitation on an existing roadway that will severely disrupt traffic.
3. Unique or experimental work.
4. More than one construction season.
5. Complex staging (multiple stages with traffic shifts).

As noted in MDOT's Construction and Technology Instructional Memorandum 1997-7, Progress Schedule Determinations/Critical Path Rates,

> *Preparation of a Critical Path is a requirement on all Consultant-designed projects, regardless of the project type or complexity*

The MDOT Resident Engineer assigned to the project should be consulted when developing Construction Critical Path Networks.

MDOT requires the precedence diagramming method. The Consultant will submit this network in MPX version 4.0.

II. NETWORK DEVELOPMENT

The network will be defined using the following steps.

1. Activity definition.
2. Activity sequencing.
3. Duration estimation.
4. Schedule development.

1. ACTIVITY DEFINITION

The Consultant will define the specific activities in enough detail so that the proper objectives will be met. The Consultant must identify assumptions (those factors considered true, real or certain). Supporting detail for the activities should be documented and organized as needed to simplify the review of the activities by MDOT personnel.

The Construction Critical Path Network must start with the **Letting Date** as the first activity and terminate with the **End of Project** as the finish activity.

A sufficient number of activities will be required with sufficient detail so that the controlling construction operation(s) may be identified. Notation on each activity shall include a brief work description and activity time duration.

2. ACTIVITY SEQUENCING

Activity sequencing involves identifying and documenting interactivity dependencies. The Consultant must sequence activities accurately to support later development of a realistic and achievable construction schedule. Two types of dependencies should be considered. Mandatory dependencies are inherent in the nature of the work being done, such as construction sequencing. Discretionary dependencies are based on a knowledge of the work to be done. Constraints are used to show how the activities relate to each. The Consultant must include documentation supporting all discretionary dependencies used in the project. All activities must lead to another activity. Only Start to Start, Finish to Finish and Finish to Start relationships will be allowed. All logic shall show how the given activity is dependent on its preceding activities.

3. DURATION ESTIMATION

After the Consultant has sequenced the activities, the Consultant should determine the activity duration. Activity duration estimating involves assessing the number of work periods likely to be needed to accomplish each activity. Duration (working days): No activity will have a duration greater than 20 working days unless approved by the Engineer. Activities that will be allowed to exceed 20 working days include, but are not limited to, working drawing approvals or other activities not under the control of the Contractor. If requested by the Engineer, the Consultant shall explain the reasonableness of activity time durations. The approved MDOT production rates will be used in estimating activity duration. These are available in the Supplemental Information section of this attachment. The Consultant must document and submit all assumptions made during the duration estimation to MDOT.

4. SCHEDULE DEVELOPMENT

The activity sequencing, duration estimations and the calendars are combined to create the construction schedule. During the development of the schedule the Consultant will verify:

1. The required schedule to build the project.
2. The constructability of the project.
3. If the maintaining traffic scheme will work.
4. If seasonal limitations will affect the construction.
5. Any other project specific considerations.

The MDOT Calendars will be used by the Consultant in developing the network. The calendars are based on a 4, 5 or 6 day work week. The MDOT Calendars are included in the Supplemental Information section of this attachment.

At this point there should be no negative float in the network. If there is, there is an error in the network and the error must be corrected before network submittal.

All summary tasks shall be removed prior to submittal to MDOT Project Manager

III. DELIVERABLES

After this final step the design Consultant will submit the finished CPM schedule to MDOT

1. Documents

A. 11" x 17" PDF plot of the network. The critical path shall be clearly identified on the plot. A larger plot may be required for complex networks.

B. Work Day / Completion Date Determination Worksheet.

C. List of any other assumptions or controlling factors used in creating the network. For example, permit or maintaining traffic restrictions.

2. Electronic Format

This section sets the requirements for the electronic submittal of the Consultant's Construction Network. All networks shall be submitted on a 3.5 inch floppy disk (or via E-mail) using one of the following formats:

A. **Standard Electronic Media Format:** This is a standard ASCII text file containing the data elements below, in the order specified. This file can be created using any text editor or word processing application (i.e., MS-Word, WordPerfect, Notepad, Write) but must be saved as an ASCII file.

The **first line** will provide a descriptive header describing the submittal and containing:

Control Section
Job Number
Route
Consultant name
Date of Submittal

The next line will be **blank**, followed by multiple data lines.

Each **data line** will contain one record pertaining to one task of the job. Separate data fields by a comma. Fields within each task line are as follows:

(Note that the term "task" is synonymous with "activity." Leave fields that are not required blank)

(1) Task # (Job # followed by a hyphen followed by this task's unique 4 digit task number. This is the Preceding Event Activity Code)
(2) Description of Task, Milestone or Hammock, blank if this record is a constraint
(3) Calendar (see attached list)
(4) Duration of task, blank for constraints
(5) Task # of the next task (Succeeding Event) - leave blank if this record is not a constraint or hammock
(6) Type of constraint (FS, SS, FF) - leave blank if this record is not a constraint.
(7) Delay, if required
(8) Original "Baseline" Start Date
(9) Original "Baseline" Finish Date
(10) Current (forecast) Start Date (early start)
(11) Current (forecast) Finish Date (early finish)
(12) Estimated completion date (if different from early start + current duration)
(13) Late Start Date
(14) Late Finish Date
(15) Actual Start Date
(16) Actual Finish Date

Example - each line contains the following:

Task # (preceding event), Description, Calendar, Duration, Next Task # (succeeding event), Constraint Type, Delay, Baseline Start, Baseline Finish, Early Start, Early Finish, Estimated Completion Date, Late Start, Late Finish, Actual Start, Actual Finish, Total Float.

B. **Primavera Project Planner(P3) 2.0 Export Procedure:** Users who have Primavera Project Planner(P3) version 2.0 can automatically create an export file by following the export procedure below. **Users having an older version of**

Primavera may use the applications export feature only if they are able to include all the data elements listed in the version 2.0 format.

1. Choose Tools, Project Utilities, **EXPORT**
2. Click **ADD**, then click **OK** to accept the next sequential ID number, or type a unique number to identify the specifications and click **OK**
3. Enter a description for the specification in the Title field
4. Specify data items to export

Activities
- Select **Contents of List**
- Use the Description column to specify which data items to export
- To add items, click the right mouse button in the Description column and choose from the list. Suggested Items include: **Activity ID, Activity Description, Actual Start, Actual Finish, Calendar ID, Early Start, Early Finish, Late Start, Late Finish, Original Duration.**
- Select **All Current, All Target**, or **All Target2**
- Set Description Length to 48

OR

Constraints
- Select **Successor relationships** - Choose this option to export Activity IDs and their corresponding successors only. Lags and relationship types will also be displayed in this output file.

5. Click **FORMAT** in Export Dialog Box
6. In the Output file section, enter a new name and path (ex. A:\actexp or A:\conexp). Do not include a file extension.
7. In the type field, click the minimize button and choose the **[.PRN] - ASCII** file format for the output file.
8. Select **CALENDAR** for Date Format
9. Set ASCII Output Field Separation to **1** and Blank column width to **0**
10. Click **RUN**
11. In the Output Options dialog box, click on **OK**

NOTE: A COMPLETED FILE EXPORT WILL CONSIST OF 2 EXPORT FILES (ACTIVITIES & CONSTRAINTS)

C. **Microsoft Project Export Procedure:** Users of Microsoft Project Version 4.0 and above can create a Microsoft Project Exchange (MPX) file by following the procedure below.

1. Choose File, Save As from the main menu
2. In the Save File as Type box Select **MPX 4.0**
3. On the drive box select a: or whichever drive is the 3.5" Floppy drive

4. Click on **OK**
This saves the file in MPX format.

D. **Primavera Sure Track:** Users of Sure Track Version 2.0 and above can create a Microsoft Project Exchange (MPX) file by following the procedure below.

1. Choose File, Save As from the main menu
2. In the filename box input a filename
3. In the Save File as Type box Select **MPX**
4. On the drive box select a: or whichever drive is the 3.5" Floppy drive
5. Click on **OK**
This saves the file in MPX format

E. **Scitor Project Scheduler 7 Export Procedure:** Users of Scitor Project Scheduler Version 7 and above can create a Microsoft Project Exchange (MPX) file by following the procedure below.

1. Choose File, Save As from the main menu
2. In filename box select a filename
3. In the Save File as Type box Select MPX
4. On the drive box select a: or whichever drive is the 3.5" Floppy drive
5. Click on **OK**
This saves the file in MPX format

F. **Export Files with Other Scheduling Applications:** Most scheduling packages have export functions similar to those described above. If the Consultant chooses to use packages with export capabilities, they shall include all items listed in the Standard Media Format in a text or ASCII type file.

IV. SUPPLEMENTAL INFORMATION

A. MDOT CRITICAL PATH-CONSTRUCTION TIME ESTIMATES

Drainage

Cross Culverts

Rural Highways	44 yd./day
Expressways	55 yd./day
Large Headwalls	5 days/unit
Slab or Box Culverts	5 days/pour
Plowed in Edge Drain (production type project)	4921 yd./day
Open Graded Underdrain (production type project)	1312 yd./day

Sewers	
0m-5m(up to 60 in. (1500mm))	44 yd./day
0m-5m(over 60 in. (1500mm))	27 yd./day
5m-over(up to 60 in. (1500mm))	27 yd./day
5m-over(over 60 in. (1500mm))	22 yd./day
Jacked-in-place	14 yd./day
including excavation pit & set up	min. 5 days
Tunnels	
hand mining	9 yd./day
machine mining	22 yd./day
including excavation pit & set up	min. 5 days
Manholes	3 units/day
Catch Basin	4 units/day

Utilities

Water Main(up to 16 in. (400mm))	109 yd./day
Flushing, Testing & Chlorination	4 days
Water Main(20 in. (500mm) – 40 in. (1050mm))	27 yd./day
Flushing, Testing & Chlorination	5 days
Order & Deliver 24 in. (600 mm) HP Water Main	50 days/order
Gas Lines	109 yd./day

Earthwork and Grading	**Metro Exp**	**Rural**
Embankment(CIP)	1962 $yd.^3$/day	6932 $yd.^3$/day
Excavation and/or Embankment(Freeway)	1962 $yd.^3$/day	12033 $yd.^3$/day
Excavation and/or Embankment(Reconstruction)	981 yd.3/day	4970 yd.3/day
Embankment(Lightweight Fill)	392 yd.3/day	785 yd.3/day
Muck(Excavated Waste & Backfill)	1962 yd.3/day	
Excavation(Widening)	656 yd./day	
Grading(G & DS)	820 yd./day	
Subbase and Selected Subbase(up to 8 yd. (7.4m))	656 yd./day	
Subbase and Selected Subbase(8 yd. (7.4 m) & over)	492 yd./day	
Subgrade Undercut & Backfill	1962 yd.3/day	
Subbase & Open-Graded Drainage Course	492 yd./day	

Surfacing

Concrete Pavement (8 ft. (7.3m))	492 yd./day

Including Forming & Curing	min. 7 days
Bituminous Pavement (8 ft. (7.3m))	1312 yd./day/course
Concrete Ramps(5.6 yd. (4.9m))	328 yd./day
Including Forming & Curing	min. 7 days
Curb(1 side)	820 yd./day
Concrete Shoulder-Median	1435 $yd.^2$/day
Bituminous Shoulders(1 side per course)	820 yd./day
Sidewalk	215 $yd.^2$/day
Sidewalk(Patching)	78 $yd.^2$/day

Structures

Sheeting(Shallow)	33 yd./day
General Excavation at Bridge Site	981 $yd.^3$/day
Excavation for Substructure(Footings)	1 unit/day
Piles(12m)	15 piles/day
Substructure(Piers & Abutments)	5 days/unit

Order and Delivery of Beams	
Plate Girders	100-120 days/order
Rolled Beams	90-120 days/order
Concrete Beams	50 days/order
Erection of Structural Steel	3 days/span
Bridge Decks	
Form & Place Reinforcement(66 yd. (60m) Structure)	15 days
Pour Deck Slab(1 1/5 days/pour)	2 days/span
Cure	14 days
2 Course Bridge Decks	
Add 9 days for Second Course Latex	
Add 12 days for Second Course Low Slump	
Sidewalks and Railings	
Sidewalks and Parapets	5 days/span
Slip Formed Barriers	2 days/span
Clean Up	10 days

Pedestrian Fencing	
Shop Plan Approval & Fabrication	1-2 months
Erection	1 week/bridge
Rip Rap Placement	
Bucket Dumped	504 $yd.^3$/day
Bucket Dumped and Hand Finished	171 - 684 $yd.^3$/day
Retaining Walls	1 Panel/day min. 10 days
Railroad Structures	
Grade Temporary Runaround	981 $yd.^3$/day
Ballast, Ties & Track	55 yd./day
Place Deck Plates	5 days/span
Waterproof, Shotcrete & Mastic	5 days/span
Railroad Crossing Reconstruction (depends on whether concrete base is involved)	10-15 work days
Temporary Railroad Structures	
Order & Deliver Steel	55 days/order
Erect Steel	1 day/span
Ties and Track	3 days/span
Pumphouse	
Structure	30 days/structure
Order & Deliver Electrical & Mechanical Equipment	90 days
Install Electrical & Mechanical Equipment	30 days
Miscellaneous	
Removing Old Pavement	66 yd./day
Removing Old Pavement for Recycling(8 yd. (7.3m))	492 yd./day
Crushing Old Concrete for 6A or OGDC	1485 tons/day
Removing Trees(Urban)	15 units/day
Removing Trees(Rural)	30 units/day
Removing Concrete Pavement	538 $yd.^2$/day
Removing Sidewalk	299 $yd.^2$/day
Removing Curb & Gutter	492 yd./day

Removing Bituminous Surface	1914 yd.^{2}/day
Conditioning Aggregate	984 yd./day
Bituminous Base Stabilizing	2990 yd.^{2}/day
Ditching	656 yd./day
Trenching for Shoulders	820 yd./day
Station Grading	667 yd./day
Clearing	9568 yd.^{2}/day
Restoration(Topsoil, Seeding, Fertilizer & Mulch)	1973 yd.^{2}/day
Sodding	2512 yd.^{2}/day
Seeding	47840 yd.^{2}/day
Guard Rail	252 yd./day
Fence(Woven Wire)	394 yd./day
Fence(Chain Link)	164 yd./day
Clean Up	656 yd./day
Concrete Median Barrier	328 yd./day
Cure	min. 7 days
Reroute Traffic(Add 4 days if 1st item)	1 day/move
Concrete Glare Screen	492 yd./day
Light Foundations	6 units/day
Order & Delivery	6-8 week/order
Remove Railing & Replace with Barrier(1 or 2 decks at a time)	4 days/side
Longitudinal Joint Repair	1750 yd./day
Crack Sealing	5249 yd./day
Joint and Crack Sealing	547 yd./day
Repairing Pavement Joints - Detail 7 or 8	219 yd./day
Seal Coat	6999 lane yd./day
Diamond Grinding/Profile Texturing Concrete	3947 yd.^{2}/day
Rest Area Building	
Order Material	3 months
Construct Building	9 months
Tower Lights	
Order and Deliver Towers	100 days
Weigh-In-Motion	
Order and Deliver Materials	1 month-6weeks
O & D with Installation	3 months

Raised Pavement Markers	300 each/day
Attenuators	2 each/day
Shoulder Corrugations, Ground or Cut	5 - 6 mi./side/day
Aggregate Base	3468 yd.^{2}/day
Aggregate Shoulders	458 yd.^{3}/day
Freeway Signing - 3# Post Type	50 signs/day
Concrete Joint Repair (High Production-Projects with > 1000 patches)	
Average(2 yd. (1.8m))	50 patches/day
Large(>2 yd. (1.8m))	598 yd.^{2}/day
Bridge Painting	108 yd.^{2}/day
Pin and Hanger Replacement	3 beams/day
Order Pin & Hanger	60 days
Bridge Repair	
Scarifying(Including Clean up)	11960 yd.^{2}/day
Joint Removal(Including Clean up)	4 yd./day
Forming & Placement	3.8 yd./day
Hydro-Demolishing	328 yd./day
Barrier Removal	16 yd./day
Placement	49 yd./day
Hand Chipping (Other than Deck)	0.31 yd.$^{3/}$person/day
Shoulder Corrugations, Ground or Cut	5 - 6 mi./side/day
Casting Latex Overlay	273 yd./day
Curing Overlay	
Regular	4 days
High Early	1 day
Thrie Beam Retrofit	33 yd./day
Beam End Repairs	
Welded Repairs	.75 days/repair
Bolted Repairs	.50 days/repair
Bolted Stiffeners (Pair)	.25 days/repair
Grind Beam Ends	.25 days/repair
Welded Stiffeners (Pair)	.25 days/repair
H-Pedestal Repairs:	

Welded Repair	.50 days/each
Replacement	1 day/each
Deck Removal	281 yd.^{2}/day

Surfacing-Bituminous

Metro-Primary(<(19800 tons (18000mtons))	
Paving	594 tons/day
Joints	164 yd./day
Cold Milling	4066 yd.^{2}/day
Aggregate Shoulders	990 tons/day
Metro Primary(>(19800 tons (18000mtons))	
Paving	594 tons/day
Joints	219 yd./day
Cold Milling	8970 yd.^{2}/day
Metro Interstate(>(19800 tons (18000mtons))	
Paving	1210 tons/day
Joints	394 yd./day
Aggregate Shoulders	990 tons/day
Urban Primary(<(19800 tons (18000mtons))	
Paving	704 tons/day
Joints	109 yd./day
Cold Milling	2033 yd.^{2}/day
Rubblizing	2033 yd.^{2}/day
Aggregate Shoulders	495 tons/day
Urban Primary(>(19800 tons (18000mtons))	
Paving	1100 tons/day
Joints	131 yd./day
Cold Milling	2033 yd.2/day
Aggregate Shoulders	550 tons/day
Urban Interstate(>(19800 tons (18000mtons))	
Paving	1320 tons/day
Joints	241 yd./day
Cold Milling	2033 yd.^{2}/day
Rubblizing	6937 yd.^{2}/day
Aggregate Shoulders	704 tons/day
Rural Primary(<(19800 tons (18000mtons))	
Paving	704 tons/day
Joints	131 yd./day
Cold Milling	649 tons/day

Crush & Shape	11960 yd.^{2}/day
Aggregate Shoulders	704 tons/day
Rural Primary(>(19800 tons (18000mtons))	
Paving	1210 tons/day
Joints	164 yd./day
Cold Milling	880 tons/day
Crush & Shape	11960 yd.^{2}/day
Rural Interstate(>(19800 tons (18000mtons))	
Paving	1329 tons/day
Joints	214 yd./day

B. WORKSHEET

WORK DAY/COMPLETION DATE DETERMINATION

CS: ____________ JN:

DESCRIPTION OF WORK: ____

MAJOR WORK ITEM	PRODUCTION QUANTITY	PRODUCTION RATE	ESTIMATED TIME

TOTAL ESTIMATED TIME:

COMPLETION DATE: ________________ (Calendar Days or Work Days)

COMMENTS:

C. MDOT CALENDARS

The following are the MDOT 4, 5 and 6 day calendars:

CALENDAR	DESCRIPTION	START	FINISH
1	Std - Apr 16 - Nov 15 - 4 day	APR 16	N0V 15
2	LP - Bit Stab - 4 day	MAY 15	OCT 15
3	UP - Bit Stab - 4 day	JUN 01	OCT 01
4	LP S of M-46 - Bit Pave - 4 day	MAY 05	NOV 15
5	LP N of M-46 - Bit Pave - 4 day	MAY 15	NOV 01
6	UP - Bit Pave - 4 day	JUN 01	OCT 15
7	LP - Bit Seal Coat - 4 day	JUN 01	SEP 15
8	UP - Bit Seal Coat - 4 day	JUN 15	SEP 01
9	Tree Planting - Deciduous - 4 day	MAR 01 OCT 01	MAY 15 NOV 15
10	Tree Planting - Evergreen - 4 day	MAR 01	JUN 01
11	South LP - Restoration - 4 day	MAY 01	OCT 10
12	North LP - Restoration - 4 day	MAY 01	OCT 01
13	UP - Restoration - 4 day	MAY 01	SEP 20
14	Full Year - Winter Work - 4 day	JAN 01	DEC 31
21	Std - Apr 16 - Nov 15 - 5 day	APR 16	NOV 15
22	LP - Bit Stab - 5 day	MAY 15	OCT 15
23	UP - Bit Stab - 5 day	JUN 01	OCT 01
24	LP S of M-46 - Bit Pave - 5 day	MAY 05	NOV 15
25	LP N of M-46 - Bit Pave - 5 day	MAY 15	NOV 01
26	UP - Bit Pave - 5 day	JUN 01	OCT 15
27	LP - Bit Seal Coat - 5 day	JUN 01	SEP 15
28	UP - Bit Seal Coat - 5 day	JUN 15	SEP 01
29	Tree Planting - Deciduous - 5 day	MAR 01 OCT 01	MAY 01 NOV 15
30	Tree Planting - Evergreen - 5 day	MAR 01	JUN 01
31	South LP - Restoration - 5 day	MAY 01	OCT 10

32	North LP - Restoration - 5 day	MAY 01	OCT 01
33	UP - Restoration - 5 day	MAY 01	SEP 20
34	Full Year - Winter Work - 5 day	JAN 01	DEC 31
35	Full Year - Expedited - 6 day	JAN 01	DEC 31

ATTACHMENT E
CS 63132 – JN 45725C: M-150 (Main Street)
From 2nd Street to University
City of Rochester, Oakland County

VIDEO PHOTOGRAPHY SCOPE OF WORK

NOTES: The Consultant shall discuss the scope of this video photography with the MDOT Project Manager before initiating any work on this project. A detailed Work Plan with estimate of hours **must** be included in the project proposal. This scope of work shall be part of **P/PMS TASK 3360**.

The limits of videotaping storm sewer are the entire length of the project from POB to POE on M-150 (Main Street) from 2nd Street to University Drive.

GENERAL CONDITIONS AND SPECIFICATIONS FOR VIDEO RECORDING STORM SEWERS:

1. All storm sewers affected by construction along M-150 (as stated above) will be video recorded.

2. Video recordings shall be performed during minimal storm water flow periods in order to maximize picture quality. The television camera and lighting shall be specifically designed for storm sewer inspection and recording. All video recordings shall be in VHS color.

3. The Consultant or contractor shall provide labor, equipment, and material to clean each storm sewer necessary in order to video record a clear, precise picture of the storm sewer conditions. For the disposal of the waste generated from the cleaning refer to Supplemental Specification 403(1). The labor, equipment, and materials necessary for the cleaning shall be include removal, transportation, and disposal of the debris at no extra cost. **The Department shall not be held liable for the loss or damage to any of the contractor's labor, equipment, or materials.**

4. The camera shall be moved through the line, in either direction, at a rate no greater than 30-feet (9.144-meters) per minute. Stopping may be necessary to properly document the sewer's condition. Winches, TV Cable, rewind, and other devices must not obstruct the camera view or interfere with proper documentation. If during the inspection, the camera will not pass through an entire section, the contractor shall set up his equipment to enter from the opposite opening. If again, the camera fails to pass through, the inspection shall be considered complete. The camera shall be capable of rotating from side to side to provide views of joint openings

5. All traffic control and traffic control devices to videotape shall be provided by the Consultant or its contractor.

6. The contractor shall observe good housekeeping practices at all times during his operations at no extra cost.

7. In the event hazardous materials become an issue; testing and disposal fees will be negotiated separated to this agreement.

FINAL DELIVERABLES

The Consultant shall provide the Department **three (3)** copies of the video recording and written reports. Measurements of the total sewer length and locations of noted sewer defects shall be recorded on the video tape **and** on the written report describing the findings. **The Consultant shall include in the written report recommendations of storm sewer areas that need to be reconstructed. Based on these findings, MDOT will determine at which location storm sewers will be reconstructed.**

Video tapes and reports will be submitted to the MDOT Project Manager two (2) weeks prior to Base Plan submittal. The tapes shall be edited and have audio production. Once submitted, title to the tape recordings shall become the property of the Department.

ATTACHMENT F
CS 63132 – JN 45725C: M-150 (Main Street)
From 2nd Street to University Drive
City of Rochester, Oakland County

MONTHLY PROGRESS REPORTS

The first two pages of this attachment are the necessary layout of the Monthly progress reports and the last three pages are a completed example.

Control Section 00000
Job Number 00000C
Structure Number S00
Date 00/00/00

MONTHLY PROGRESS REPORT

A. Work accomplished during the previous month.

B. Anticipated work items for the upcoming month.

C. Real or anticipated problems on the project.

D. Update of previously approved detailed project schedule (attached), including explanations for any delays or changes.

E. Items needed from MDOT.

F. Copy of Verbal Contact Records for the period (attached).

Structure Number - Control Section - Job Number
Route, Location Description
Design Schedule as of 00/00/00

LIST TASKS, SUBMITTALS, APPROVALS AND MEETINGS AS OUTLINED IN SCOPE OF DESIGN SERVICES AS NEEDED. THIS LIST IS JUST AN EXAMPLE.

Original Authorized Start Date	Original Authorized Finish Date	(Anticipated) or **Actual** Start Dates	(Anticipated) or **Actual** Finish Dates	Task	Task Description
00/00/00	**00/00/00**	00/00/00	**00/00/00**	??	Initial project meeting.
00/00/00	**00/00/00**	00/00/00	**00/00/00**	3330	Conduct Design Survey
00/00/00	**00/00/00**	00/00/00	**00/00/00**	3360	Prepare Base Plans
00/00/00	**00/00/00**	00/00/00	**00/00/00**		Submit Base Plans
00/00/00	**00/00/00**	00/00/00	**00/00/00**	3580	Develop Preliminary Plans
00/00/00	**00/00/00**	00/00/00	**00/00/00**	3390	Develop Construction Zone Traffic Control Concepts
00/00/00	**00/00/00**	00/00/00	**00/00/00**	3540	Develop Construction Zone Traffic Control Plan
00/00/00	(00/00/00)	00/00/00	**00/00/00**	3550	Develop Preliminary Traffic Operations Plan
00/00/00	(00/00/00)	00/00/00	**00/00/00**	3351	Review & Submit of Preliminary Right-Of-Way Plans
00/00/00	(00/00/00)	00/00/00	**00/00/00**		Submittal of The Plan Review Package
00/00/00	(00/00/00)	00/00/00	**00/00/00**		Completion of the Plan Review Meeting
00/00/00	(00/00/00)	00/00/00	**00/00/00**	3840	Develop Final Plans and Specifications
00/00/00	(00/00/00)	00/00/00	**00/00/00**		Submittal of final plans/proposal package to MDOT for final review.
00/00/00	**00/00/00**	00/00/00	**00/00/00**	3870	Omissions/Errors Check (OEC) Meeting
00/00/00	**00/00/00**	00/00/00	**00/00/00**		Consultant's Plan Completion: Final Construction Plan/Proposal package with recommendations incorporated to MDOT (two weeks after OEC Meeting)
00/00/00	**00/00/00**	00/00/00	**00/00/00**		Final Deliverables to MDOT

SAMPLE

Control Section 12345

Job Number 11111C
Structure Number S02
Date:

MONTHLY PROGRESS REPORT

A. Work accomplished during the previous month.

1. During the last month we completed the Final Right of Way plans and submitted them to Mr. Project Manager on 00/00/00.

B. Anticipated work items for the upcoming month.

1. Submit the Preliminary Plans and related material on 00/00/00.

2. Attend the meeting regarding the Ameritech lines on the bridge, scheduled for 00/00/00.

C. Real or anticipated problems on the project.

1. We foresee no problems at this time.

D. Update of previously approved detailed project schedule (attached), including explanations for any delays or changes.

1. The design is falling behind schedule because we had problems resolving the geometries of the ramps in relation to the bridge. The Preliminary Plan submittal will be the only task affected by this delay because we will make up the lost time prior to submitting the Final Plans and Specifications.

E. Items needed from MDOT.

1. Prior to final Plan submittal we will need the latest Special provision and Supplemental Specification checklist.

F. Copy of Verbal Contact Records for the period (attached).

1. Discussed bridge and ramp geometries with Traffic Safety Eng. of MDOT Traffic and Safety Division on 00-00-00.

SN: S02 - CS: 12345 - JN: 11111C
M-111, from There Village Limits to north of That Road
Design Schedule as of 00/00/00

Original Authorized Start Date	Original Authorized Finish Date	(Anticipated) or **Actual** Start Dates	(Anticipated) or **Actual** Finish Dates	Task	Task Description
01/12/95	01/12/95	**01/12/95**	**01/12/95**??		Initial project meeting.
01/29/95	01/29/95	**01/30/95**	**01/30/95**3330		Conduct Design Survey.
02/17/95	04/10/95	**02/17/95**	**04/20/95**3360		Prepare Base Plans.
02/29/95	02/29/95	**02/29/95**	**02/29/95**3390		Develop the Construction Zone Traffic Control Concepts
03/12/95	03/13/95	**03/12/95**	(03/30/95)	3540	Develop Construction Zone Traffic Control Plan
03/20/95	03/19/95	**03/25/95**	(03/30/95)	3551	Develop/Review Preliminary Traffic Signal Plan
07/01/95	07/01/95	(07/01/95)	(07/01/95)	3590	The Plan Review Meeting
07/11/95	08/11/95	(07/11/95)	(08/11/95)	3821	Complete/Review Traffic Signal Plan
09/15/95	09/15/95	(09/15/95)	(09/15/95)	3830	Complete Construction Zone Traffic Control Plan.
09/16/95	09/16/95	(09/16/95)	(09/16/95)	3840	Develop Final Plans and Specifications
09/25/95	09/23/95	(09/25/95)	(09/25/95)	3870	Omissions / Errors Check (OEC) Meeting

VERBAL CONTACT RECORD

Control Section 12345
Job Number 11111C
Structure Number S02
Date 00/00/00

Joe Engineer talked to Mr. Traffic and decided to use a 0.05'/ft super on ramp A leading into the bridge.